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CENTRAL INTELLIGENCE AGENCY  
WASHINGTON, D.C. 20505

1 May 1980

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MEMORANDUM FOR: The Director of Central Intelligence

FROM : John N. McMahon  
Deputy Director for Operations

SUBJECT : USSR GENERAL STAFF ACADEMY LESSONS : Work of the  
Nuclear Planning Group Using the Calculations Performed  
on Electronic Computers to Substantiate the Decision  
to be Adopted by the Commander on Employing Nuclear  
Weapons in an Operation

1. The enclosed Intelligence Information Special Report is part of a series now in preparation based on a collection of 29 lessons, classified TOP SECRET, prepared in 1977 for use in the Soviet General Staff Academy. The lessons are broken down into two parts: the first 19 lessons deal with the staff preparation of a front offensive operation with conventional and nuclear weapons, the remaining 10 lessons deal with the conduct of an offensive employing conventional weapons at first with a transition to the use of nuclear weapons. This report is a translation of the lesson on the work of the nuclear planning group of a front staff in processing computerized calculations and in preparing and submitting the conclusions and proposals needed by a commander to make the decision on the use of nuclear weapons.

2. Because the source of this report is extremely sensitive, this document should be handled on a strict need-to-know basis within recipient agencies.

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John N. McMahon

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## Intelligence Information Special Report

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COUNTRY USSR

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DATE OF  
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SUBJECT

GENERAL STAFF ACADEMY LESSON NO. 1f : Work of the Nuclear Planning Group  
Using the Calculations Performed on Electronic Computers to Substantiate  
the Decision to be Adopted by the Commander on Employing Nuclear Weapons in  
an Operation

SOURCE Documentary

Summary:

The following report is a translation from Russian of a lesson, classified TOP SECRET, prepared for use at the General Staff Academy of the Armed Forces of the USSR. This lesson is for the instruction of students acting as members of the nuclear planning group of the front's operations directorate in preparing the initial nuclear strike tasks to be calculated by the MINSK-32 computer, in analyzing the calculated results, and in preparing and submitting the conclusions and proposals needed by a commander to make the decision on the use of nuclear weapons. It reveals the distribution of the 680 nuclear warheads allocated for the entire operation, the main targets of the initial nuclear strike: NATO missile units, aircraft at airfields, nuclear warhead depots, control, warning, and command posts, and ground force divisions; and a detailed breakdown of the number and yield of the nuclear missiles and bombs to be used in this strike.

End of Summary

Comment:

The "Assignment" and "Appendix" mentioned in the text were not received. Although not specifically identified, the colors representing NATO countries in this series probably equate as follows:

Brown - West Germany  
Blue - Great Britain  
Green - United States  
Lilac - Belgium

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Lesson No. 1f

I. Lesson subject: "Work of the nuclear planning group using the calculations performed on electronic computers to substantiate the decision to be adopted by the commander on employing nuclear weapons in an operation."

II. Training objectives of the lesson:

-- to study closely with the students the composition, function, and content and sequence of work of the nuclear planning group of the front field headquarters with calculations performed on an electronic computer to substantiate the decision to be adopted by the commander on employing nuclear weapons in a front offensive operation;

-- to teach the students the practical work in preparing and performing calculations on an electronic computer using the methodology for the planning of massed nuclear strikes;

-- to train the students in analyzing the results of the calculations obtained on an electronic computer, and in preparing and reporting the conclusions and proposals needed by the commander to adopt a decision;

-- to investigate possible ways of improving the methods of allocating nuclear warheads in conformity with the tasks of the front operation.

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III. Training topics and the time for their completion.

Number	Training Topics	Time for completion (minutes)		Total (minutes)
		for group training	for individual study	
1	2	3	4	5
1	Composition and function of the nuclear planning group. Use of electronic computers for calculations on planning the employment of nuclear weapons (methodology No. 6)	45	--	45
2	Formulation of the task for performance of calculations	25	--	25
3	Preparation of the initial data and filling in the query forms for performing calculations on the planning of the <u>front's</u> initial nuclear strike	30	--	30

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1	2	3	4	5
4	Analysis of the variant obtained on the electronic computer on the allocation of nuclear warheads for the targets to be destroyed by the <u>front's</u> initial nuclear strike	20	--	20
5	Performance of the calculations on the allocation of nuclear warheads in conformity with the <u>front's</u> tasks	30	--	30
6	Preparation and reporting of conclusions and proposals needed by the commander to adopt the decision on employing nuclear weapons in the operation	25	--	25
	Critique of the lesson	5	--	5
	Totals	180	--	180

IV. Method of conducting the lesson -- group lesson with a practical performance of calculations on the MINSK-32 electronic computer and an analysis of their results.

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V. Procedure for conducting the lesson:

First training topic: "Composition and function of the nuclear planning group. Use of electronic computers for calculations on planning the employment of nuclear weapons (methodology No. 6)."

The students prepare answers to particular questions posed by the instructor, using the training methods material of the Appendix to the assignment "Operational calculations using electronic computers to support the adoption of a decision on the employment of nuclear weapons in an operation."

Second training topic. Formulation of the task for performance of calculations.

A student in the role of chief of staff of the front, who is also chief of the nuclear planning group, assigns the task, using a map, of the calculations to be performed to substantiate the adoption of the decision on employing nuclear weapons in the operation.

The plan of reporting the task formulation:

-- purpose of the calculations;

-- enemy targets that are to be struck in the initial nuclear strike of the front and tasks to be accomplished by nuclear weapons while front troops fulfill the immediate and follow-up tasks;

-- aggregate number of nuclear warheads allocated for the conduct of the front operation, their approximate distribution on the basis of the tasks of the front, the composition of the forces and means allocated for delivery of the initial nuclear strike;

-- time for reporting the results of the calculations, and the conclusions and proposals needed for the adoption of the decision on the employment of nuclear weapons in the operation.

A variant of the content of the task assigned to the nuclear planning group:

1. Perform the necessary calculations for the purpose of substantiating the decision to be made concerning the employment of nuclear weapons in the front offensive operation that is being planned. Perform

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the calculations involving the planning of the front's initial nuclear strike using the MINSK-32 electronic computer.

2. In the initial nuclear strike of the front:

a) destroy:

-- 2nd Pershing Squadron;

-- two Lance guided missile battalions (650th, 150th), 24th and 50th Lance missile regiments, and a Sergeant guided missile battalion (450th);

-- delivery aircraft at 14 airfields (numbers 07, 16, 12, 23, 24, 27, 28, 30, 31, 33, 34, 41, 43, 46);

-- control and warning centers and posts in the areas of WROHM, EYTIN /?sic for EIGEN/, BADMUNDEN /?sic for BAD-MUNDER/, FALLINGBOSTEL, AHRENSBURG);

-- six army corps command posts (Brown 1st, 4th, and 6th army corps, Blue 1st Army Corps, Lilac 1st and 2nd army corps;

-- command post of the 2nd Allied Tactical Air Force, forward command post of the Northern Army Group, command post of the 71st p rz/illegible letter/\*;

-- eight Hawk surface-to-air guided missile battalions (3rd, 31st, 35th, 36th, 38th, 39th, 5th, and 37th), 24th and 25th Nike-Hercules surface-to-air guided missile battalions, 36th Thunderbird regiment;

\* Translator's note: expansion of this unusual abbreviation is unknown.

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b) inflict damage on 17 divisions and one brigade of the enemy as follows:

-- 75 to 80 percent damage on the Brown 3rd, 7th, and 16th tank divisions; the 11th, 13th, 14th, 15th, 18th, and 6th motorized infantry divisions and the 27th Airborne Brigade; the Green 4th Mechanized Division; the Blue 1st, 2nd, and 4th armored divisions;

-- 30 to 50 percent damage on the Brown 1st and 21st motorized infantry divisions, the Lilac 1st and 4th motorized infantry divisions.

3. While front troops are fulfilling the immediate task, deliver strikes on the unharmed targets of the initial nuclear strike and rout the large units of the first operational echelon of the Northern Army Group (Table 3 of the Assignment).

4. While front troops are fulfilling the follow-up task, rout the troops of the second operational echelon of the Northern Army Group and strike newly discovered important enemy targets (Table 3 of the Assignment).

5. A total of 680 nuclear warheads are allocated for the conduct of the front offensive operation, 360 of them are for the rocket troops and artillery and 320 are for the First Air Army.

The approximate allocation of warheads with respect to front tasks is:

-- for the initial nuclear strike -- 376 (rocket troops and artillery -- 176, air army -- 200);

-- for fulfilment of the immediate task -- 166 (rocket troops and artillery -- 94, air army -- 72);

-- for fulfilment of the follow-up task -- 100 (rocket troops and artillery -- 64, air army -- 36);

-- in the reserve of the front commander -- 38 (rocket troops and artillery -- 26, air army -- 12).

During the delivery of the initial nuclear strike the troop commander has in the air a reserve of 15 delivery aircraft with 15 nuclear bombs (from among those which are allocated for fulfilment of the immediate task).

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6. The following are allocated to participate in the initial nuclear strike of the front:

-- operational-tactical missile launchers -- 90 (the 2nd and 3rd front missile brigades with 18 launchers each; the 4th, 6th, 7th, and 9th army missile brigades with 12 launchers each);

-- tactical missile launchers of the separate missile battalions of 14 divisions -- 56 (16 from the 4th Army, 20 from the 7th Army, 20 from the 9th Army);

-- delivery aircraft from the First Air Army -- 200.

7. Employ in the front's initial nuclear strike:

a) operational-tactical missiles -- 90 (2nd Front Missile Brigade 1 x 20 /kiloton yield/, 4 x 40 /KT/, 13 x 100 /KT/; 3rd Front Missile Brigade -- 3 x 20 /KT/, 2 x 40 /KT/, 13 x 100 /KT/; 4th and 6th army missile brigades -- /each/ 1 x 20 /KT/, 3 x 40 /KT/, 8 x 100 /KT/; 7th and 9th army missile brigades -- /each/ 2 x 20 /KT/, 2 x 40 /KT/, 8 x 100 /KT/; 2nd Corps Missile Brigade -- 1 x 20 /KT/, 3 x 40 /KT/, 2 x 100 /KT/);

b) tactical missiles -- 86 (3rd Separate Missile Battalion -- 1 x 3 /KT/, 1 x 10 /KT/, 5 x 20 /KT/; 5th and 8th separate missile battalions -- /each/ 1 x 10 /KT/, 6 x 20 /KT/; 9th Separate Missile Battalion -- 1 x 10 /KT/, 3 x 20 /KT/; 1st and 7th separate missile battalions -- /each/ 2 x 10 /KT/, 5 x 20 /KT/; 14th, 11th, and 6th separate missile battalions -- /each/ 4 x 20 /KT/; 4th Separate Missile Battalion -- 1 x 3 /KT/, 2 x 10 /KT/, 4 x 20 /KT/; 10th and 21st separate missile battalions -- /each/ 1 x 3 /KT/, 3 x 10 /KT/, 3 x 20 /KT/; 18th and 23rd separate missile battalions -- /each/ 7 x 20 /KT/);

c) nuclear bombs -- 200 (2nd Fighter-Bomber Air Division -- 9 x 10 /KT/, 8 x 20 /KT/, 5 x 50 /KT/, 10 x 100 /KT/, 28 x 200 /KT/; 6th Fighter-Bomber Air Division -- 11 x 5 /KT/, 4 x 10 /KT/, 2 x 20 /KT/, 5 x 50 /KT/, 24 x 100 /KT/, 14 x 200 /KT/; 8th Fighter-Bomber Air Division -- 19 x 5 /KT/, 16 x 100 /KT/, 5 x 200 /KT/; 4th Bomber Air Division -- 4 x 10 /KT/, 10 x 100 /KT/, 13 x 200 /KT/, 100 /?sic for 13/ x 300 /KT/).

In the initial nuclear strike the total is 376 warheads.

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8. Report at 1400 hours 26 August the results of the calculations and the conclusions and proposals regarding the adoption of the decision on the employment of nuclear weapons in the front offensive operation.

Third training topic. Preparation of the initial data and filling in the query forms for performing calculations on the planning of the front's initial nuclear strike.

In the assignment there are query forms No. 1 (means) and No. 2 (targets of destruction). It is recommended that the work of filling in the forms be organized in the following manner. Each query form is to be filled out by two people. One of them enters the initial data onto the columns of the forms; the other dictates the necessary information to him, using a map (areas and zones of the target locations, disposition areas of the delivery means, the required levels of damage, etc.).

The instructor, proceeding from this principle, designates two or three foursomes of students and gives instructions to start filling in the query forms.

Within the time set aside for this work, the students fill in all the incomplete columns of the forms provided for in the Assignment.

Upon finishing the forms, one of the students in the role of an officer of the nuclear planning group delivers the forms to the computer center officer.

Fourth training topic. Analysis of the variant obtained on the MINSK-32 electronic computer on the allocation of nuclear warheads for the targets to be destroyed by the initial nuclear strike.

Upon completion of the calculations on the MINSK-32 electronic computer, the response forms are sent to the nuclear planning group (to the principal place where the lesson is conducted). The students start analyzing the obtained results according to the instruction of the instructor, evaluate from the operational point of view the given variant of the allocation of warheads for the targets, work out their proposals on improving it, and based on analysis of the obtained solution and their conclusions, prepare proposals regarding the plan of the initial nuclear strike.

It is advisable to conduct the operational analysis of the results of the calculation in the following sequence.

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1. Compare the damage indicators on the response form with the assigned level of damage of the relevant target.
2. Analyze the results according to the groups of targets (in order of importance).
3. Analyze the results according to the zones of the armies.
4. Analyze the total results.
5. Identify the possibilities of improving the variant of warhead allocation for the targets of the initial nuclear strike.

The variant of the report is distributed to the instructor together with the results of the calculations within two to three days before the lesson.

Fifth training topic. Performance of the calculations on the allocation of nuclear warheads in conformity with the front's tasks.

By direction of the instructor, each student independently performs these calculations by hand, using Table 3 in the assignment and the corresponding rules of the Appendix "Operational calculations using electronic computers to support the adoption of a decision on the employment of nuclear weapons in an operation."

The reference data for these calculations are in the copies of the Assignments obtained by the instructor.

The instructor monitors the correctness of the students' calculations by calling upon individual students to report their particular results.

Sixth training topic. Preparation and reporting of conclusions and proposals needed by the commander to adopt the decision on employing nuclear weapons in the operation.

The preparation of the conclusions amounts to a joint analysis of the conclusions obtained on the basis of the results of the calculations on the planning of the initial nuclear strike and on the allocation of warheads according to the front's tasks (in working out the fifth training topic).

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After this independently completed analysis, one of the students (as designated by the instructor), in the role of a senior officer of the operations directorate and officer of the nuclear planning group, reports to the front chief of staff, who is chief of the nuclear planning group, the conclusions and proposals that help the commander make a decision on the employment of nuclear weapons in the front offensive operation.

Rough plan of the report:

1. Proposals on allocating nuclear warheads on the basis of the tasks of the front in the operation (based on Table 4).
2. Expected enemy losses as a result of employing nuclear weapons in the operation in accordance with the proposed recommendations of the nuclear planning group (according to the results of the calculations for the initial nuclear strike and based on the data of Table 3).
3. Conclusions and proposals.

The variant of the report for the instructor is distributed together with the response form after the check calculations that were performed on the electronic computer immediately before the lesson (within two or three days).

#### Critique of the lesson

The lesson director informs the students of the lesson subject and training objectives, and indicates how they were achieved during the lesson. He rates the work of the students and evaluates their reports, noting the positive aspects of the reports and the shortcomings. He gives instructions on eliminating the shortcomings brought out in the lesson. As the need arises, he gives individual assignments to certain students.

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